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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,216	10/16/2000	KNUD ERIK BAEKGAARD	740119-98	8804

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EXAMINER

GRIER, LAURA A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 09/02/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/688,216

Applicant(s)

BAEKGAARD ET AL.

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 09/10/11

2a) ☐ This action is **FINAL**.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) 2,21 and 22 is/are withdrawn from consideration.

5) ☒ Claim(s) 3,4 and 13-20 is/are allowed.

6) ☒ Claim(s) 1,6 and 9-12 is/are rejected.

7) ☒ Claim(s) 7 and 8 is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

4) ☒ Interview Summary (PTO-413) Paper No(s). 12

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

**DETAILED ACTION**

1. **Claims 2, 21 and 22** have been cancelled (see page 6 of paper no. 11 and see attached Interview Summary.)

***Claim Rejections - 35 USC § 112***

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2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 10** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 10, the claim language of lines 5-7 is unclear as to what is being claimed. Thus, the claim is indefinite.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 6, 9, and 11-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Harley of in view of Hower, U. S. Patent No. 4534058.

Regarding **claim 1**, Harley discloses an active noise control stethoscope (figures 1-4).

Harley's disclosure comprises a sensor means, which inherently teaches a vibration transducer as

evident by the fact that sensor detects body sounds (vibrations, etc.) and converts the sound into electrical signals (col. 10, lines 55-60); a headset (13), which constitutes as headphones; a FIR filter for providing amplification (col. 10, lines 10-12); and a digital filter (col. 7, lines 5-27), wherein the electric stethoscope provides an acoustic output; and as well a noise control stethoscope constitutes as a type of acoustic stethoscope. However, Harley fails to specifically disclose a pre-emphasis filter means. The examiner maintains that such a filter was well known in the art.

Regarding the filter, in a similar field of endeavor, Hower discloses electronic a stethoscope that includes a filter integrated with an amplifier (abstract and col 1, lines 32-41), which reads a pre-emphasis filter means.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Harley by incorporating a filter as taught by Hower for the purpose of removing unwanted frequencies (high frequencies and amplifying low frequencies from a range of 25 to 150-200Hz for the purpose of providing superior noise rejection as taught by Hower.

Regarding **claim 6**, Harley and however discloses everything claimed as applied above (see claim 1). Harley further discloses impulse transfer function of a digital filter is obtained by measurement of an active noise control stethoscope (a digital filter (col. 7, lines 5-27), wherein the electric stethoscope provides an acoustic output; and as well a noise control stethoscope (constitutes as a type of acoustic stethoscope).

Regarding **claim 9**, Harley and Hower discloses everything claimed as applied above (see claim 1). Harley further discloses support providing automatic amplification control (col. 10, lines 25-30).

Regarding **claim 11**, Harley and Hower discloses everything claimed as applied above (see claim 1). Harley further discloses the headphone arrangement with transducer fitted in an immediate proximity of the ear canal of each ear (figure 1 and col. 5, lines 46-51).

Regarding **claim 12**, Harley and Hower discloses everything claimed as applied above (see claim 1). Harley further discloses means of providing adequate compensation (col. 9, lines 63-67 and col. 10, lines 25-46).

**Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Harley in view of in view of Dieken and further in view of Greenberger, U. S. Patent No. 5492129.

Regarding **claim 5**, Harley discloses an active noise control stethoscope (figures 1-4). Harley's disclosure comprises a sensor means, which inherently teaches a vibration transducer as evident by the fact that sensor detects body sounds (vibrations, etc.) and converts the sound into electrical signals (col. 10, lines 55-60); a headset (13), which constitutes as headphones; a FIR filter for providing amplification (col. 10, lines 10-12); and a digital filter (col. 7, lines 5-27), wherein the electric stethoscope provides an acoustic output; and as well a noise control stethoscope constitutes as a type of acoustic stethoscope. However, Harley fails to specifically disclose a pre-emphasis filter means and multiple impulse transfer functions corresponding to multiple types of stethoscopes. The examiner maintains that such a filter, and as well, multiple

impulse transfer functions corresponding to multiple types of stethoscopes, were well known in the art.

Regarding the filter, in a similar field of endeavor, Dieken discloses an electronic stethoscope having a binaural earpiece. Dieken's disclosure teaches an electronic stethoscope providing an acoustic output like that of a conventional stethoscope and as well, Dieken

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discloses a filter for high frequency characteristics (col. 7, lines 4-20), which may constitute as a pre-emphasis filter for emphasizing high frequencies.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Harley with a high frequency filter for the providing high frequency conditioning of the sounds picked up or sensed from a person's body.

Regarding the multiple impulse transfer functions corresponding to multiple types of stethoscopes, Greenberger discloses a noise-reducing stethoscope. Greenberger's disclosure teaches that different types of chest pieces may be used and the effectiveness of these different types of chest pieces is dependent on the different filter characteristic, wherein the may automatically adapt and a new type of chestpiece is introduced (col. 5, lines 55-67 and col. 6, lines 1-8). Thus, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Harley and Dieken by providing a multiple or different types of filter characteristics such as impulse transfer functions to correspond with the respective chest piece for purpose of ensuring optimal filtering by filter and function and accuracy in measurements from the stethoscopes, respectively as taught by Greenberger.

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3. **Claims 3-4, 13-20** are allowed.
4. **Claims 7-8** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Response to Arguments***

5. The applicant did not provide any arguments.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG

August 24, 2003

MINSUN CHEN HARVEY  
PRIMARY EXAMINER